CLAIMS

What is claimed is:

1.   A system for automatic replacement of machines in a computer network, comprising:

5   a database of configuration information, the database including configuration information for the available replacement machines and for a failed machine;

          a machine assignment module in communication with the database and configured to identify and assign one of the available replacement machines as a

10   replacement machine for the failed machine based on a comparison of the configuration information for the failed machine to that for the available replacement machines; and

          a configuration module in communication with the machine assignment module for generating configuration data for replacement of the failed machine with the replacement machine in the computer network.

15   2.   The system of claim 1, wherein the database of configuration information includes configuration information for active machines in the computer network.

3.   The system of claim 1, further comprising:

          an installation module in communication with the configuration module and configured to cause the configuration data generated by the configuration module to take

20   effect in at least some of the other machines in the computer network.

4.   The system of claim 3, wherein the installation module is further configured to cause the configuration data to take effect in machines in the computer network that are dependent upon the failed machine.

5.   The system of claim 1, wherein the machine assignment module is further configured to compare a predetermined set of configuration parameters of the failed machine to those of the available replacement machines.

6.   The system of claim 5, wherein the predetermined set of configuration parameters includes at least one of processor speed, disk drive size, and amount of random access memory (RAM).

7.   The system of claim 1, further comprising:

a detection module configured to detect fault in at least one of a software component and a hardware component in the machines in the computer network, wherein upon detection of the fault in the failed machine, the machine assignment module identifies and assigns the replacement machine.

8.   The system of claim 7, further comprising:

a repair module configured to attempt to repair the fault identified by the detection module in the failed machine.

9.   The system of claim 1, further comprising:

a replacement module configured to copy data from another copy of the failed machine in the computer network into the replacement machine identified by the machine assignment module.

5   10.   The system of claim 9, wherein the failed machine and the another copy of the failed machine in the computer network are selected from the group consisting of a front end server, a load balancer, an index server, and a cache server.

11.   A method for automatic replacement of machines in a computer network, comprising:

10   identifying a failed machine in the computer network;

performing a lookup in a database of configuration information containing configuration information for the available replacement machines and for the failed machine;

identifying and assigning a replacement machine selected from the available

15   replacement machines, the identifying and assignment being based on a comparison of the configuration information for the failed machine to that of the available replacement machines; and

generating configuration data for replacement of the failed machine with the replacement machine in the computer network.

20   12.   The method of claim 11, wherein the database of configuration information includes configuration information for active machines in the computer network.

13. The method of claim 11, further comprising:

causing the configuration data generated to take effect in at least some of the other machines in the computer network.

14. The method of claim 13, wherein the causing includes causing the configuration data to take effect in machines in the computer network that are dependent upon the failed machine.

15. The method of claim 11, wherein the identifying and assignment includes comparing a predetermined set of configuration parameters of the failed machine to those of the available replacement machines.

16. The method of claim 15, wherein the predetermined set of configuration parameters includes at least one of processor speed, disk drive size, and amount of random access memory (RAM).

17. The method of claim 11, wherein the identifying includes detecting fault in at least one of a software component and a hardware component in the machines in the computer network.

18. The method of claim 17, further comprising:

attempting to repair the identified fault in the failed machine, wherein upon unsuccessful repair of the failed machine, the identifying, the performing, the identifying and assigning, and the generating are performed.

19.   The method of claim 11, wherein the unsuccessful repair is after a predetermined maximum number of performing the attempting to repair.

20.   The method of claim 11, further comprising:

copying data from another copy of the failed machine in the computer network into the replacement machine.

21.   The method of claim 20, wherein the failed machine and the another copy of the failed machine in the computer network are selected from the group consisting of a front end server, a load balancer, an index server, and a cache server.

22.   A computer program product embodied on a computer-readable medium, the computer program product including instructions which when executed by a computer system are operable to cause the computer system to perform acts comprising:

identifying a failed machine in the computer network;

performing a lookup in a database of configuration information containing configuration information for the available replacement machines and for the failed machine;

identifying and assigning a replacement machine selected from the available replacement machines, the identifying and assignment being based on a comparison of the configuration information for the failed machine to that of the available replacement machines; and

generating configuration data for replacement of the failed machine with the replacement machine in the computer network.

23. The computer program product of claim 22, wherein the database of configuration information includes configuration information for active machines in the computer network.

24. The computer program product of claim 22, further including instructions operable to cause the computer system to perform acts comprising:

causing the configuration data generated to take effect in at least some of the other machines in the computer network.

25. The computer program product of claim 24, wherein the causing includes causing the configuration data to take effect in machines in the computer network that are dependent upon the failed machine.

26. The computer program product of claim 22, wherein the identifying and assignment includes comparing a predetermined set of configuration parameters of the failed machine to those of the available replacement machines.

27. The computer program product of claim 26, wherein the predetermined set of configuration parameters includes at least one of processor speed, disk drive size, and amount of random access memory (RAM).

28. The computer program product of claim 22, wherein the identifying includes detecting fault in at least one of a software component and a hardware component in the machines in the computer network.

29.   The computer program product of claim 28, further including instructions operable to cause the computer system to perform acts comprising:

attempting to repair the identified fault in the failed machine, wherein upon unsuccessful repair of the failed machine, the identifying, the performing, the identifying

5   and assigning, and the generating are performed.

30.   The computer program product of claim 29, wherein the unsuccessful repair is after a predetermined maximum number of performing the attempting to repair.

31.   The computer program product of claim 22, further including instructions operable to cause the computer system to perform acts comprising:

10   copying data from another copy of the failed machine in the computer network into the replacement machine.

32.   The computer program product of claim 31, wherein the failed machine and the another copy of the failed machine in the computer network are selected from the group consisting of a front end server, a load balancer, an index server, and a cache

15   server.